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ALBERTA FARM LAND VALUE

AND

MARKET SITUATION

by

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FOREWORD

Alberta farm commodity prices and land values have moved through a wide range since the year 1900 when the main surge of settlement started. Farms were settled under favorable conditions of price and production, and the trend in the price of land was upward. In general, favorable prices continued until 1930. At that time world commodity prices fell sharply and remained low until stimulated by war conditions in 1940-41. Land values followed the movement of commodity prices.

The value of farm land is of general concern. Both total and relative values influence the transfer of land ownership and the tenure situation of the farm operators. Community stability and the control and use of agricultural resources are affected. In particular the rise and fall in land value has a direct bearing on the welfare of farmers and the policies of credit agencies and of governments.

The purposes of this study may be summarised as follows: (1) to trace the course of recent changes in Alberta farm values; (2) to examine the methods of financing the transfer of ownership;and (3) to discern some of the significant factors affecting farm values.

The data for this study were obtained from several sources. Real estate agents throughout Alberta provided the details of the properties sold and the terms of sale. The Alberta Department of Municipal Affairs, the Dominion Mortgage and Investment Association, the Dominion Bureau of Statistics, the Department of Veterans Affairs and many interested people also contributed important information. Their co-operation is gratefully acknowledged.

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INTRODUCTION

The average selling price of Alberta farm real estate more than doubled between the years 1939 and 1950. This suggests that land was twice as valuable in 1950. The value of agricultural land, however, arises from several sources. Primarily it is derived from the value of the products sold, and thus land has value when it is capable of earning income through production. But, in addition to its use for production, farm land is used as a site for the farm home. This creates a value through location. Individual preference with respect to location and other desirable qualities gives value to a particular parcel or farm. This preference is reflected in the demand for land. A preference for farm land in a certain locality, or for specific parcels, may be due to the desire to own land that is close to the present farm, relatives, a school, church, highway or market.

The supply of suitable land cannot readily be increased, decreased, nor can the location be changed. The effective supply of farm land is limited. If the supply were highly flexible, the price of land would not rise and fall in unison with the price of farm products. But, the supply is not flexible and land values tend to follow movements in farm commodity prices. In view of the inelasticity of the supply of land, a variation in the demand for land causes a proportionally greater change in the price.

Indestructibility is another important characteristic of land. A parcel of land retains its size and inherent qualities in comparison with other investments that may become practically worthless during unfavorable price periods. Farm land is tangible and elemental. To investors, land is a solid and stable investment and frequently this is a greater source of value than the comparative rate of return from it.

In summary, land value or worth arises from its productive qualities, fixed supply, location and indestructibility. This collection of qualities is represented in exchange by one value - its market value or price.

The selling price is the amount of money for which ownership

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is exchanged. It is a meeting point of values arising from ownership of the property with satisfactions obtainable elsewhere. The price paid will give the buyer as much or more satisfaction or income from possession of the land than he could obtain by using his money in some other way. The seller will receive as much or more satisfaction in having the money, and its control over other goods, than in possessing the land. The number of sales varies between periods of time, depending upon the comparative attraction of alternative opportunities. However, the price fixing forces of demand and supply are at work and the land market is seldom totally inactive.

THE ALBERTA LAND MARKET

The price of all Alberta farm land started upward in 1942 following several years without change. It continued upward until by the end of 1950 the average price was substantially greater than that for 1941. The average selling price per acre of Alberta farm land and improvements for the years 1939-1950 based on the sales data provided by real estate agents is shown in Table 1.

Table 1.- Average Selling Price per Acre of Alberta Farm Land and Improvements, 1939-1950 a/

Year	Selling price of land and improvements
	- dollars -
1939	15
1940	15
1941	15
1942	16
1943	17
1944	19
1945	21
1946	24
1947	27
1948	29
1949	31
1950	33

a/ Compiled from data provided by Alberta real estate agents.

Land values estimated by crop correspondents and reported to the Dominion Bureau of Statistics averaged $16 per acre in 1939 and $35 in 1950. In general this range of prices indicated a trend similar to the prices reported by real estate agents. However, price determining factors do not affect all land to the same extent. The value of each farm is affected by broad regional characteristics and peculiar qualities. To an important extent these relate to the type and intensity of farming.

Agricultural Regions

The organization of individual farms varies considerably throughout Alberta, reflecting farmers' efforts to adjust their farm program to the physical features of their environment, and to certain variable and uncertain conditions of the particular area. In a region where one product or a group of similar commodities provides the important source of income, land prices follow rather closely the trend in price of the most important product. In regions where there is no predominant commodity produced and the land is adapted to a variety of uses, land price will be less senstive to particular commodity price changes.

There are three broad agricultural regions in Alberta where the farming pattern land values differ significantly because of dissimilar soil and climate (Table 2).

Table 2.- Regional Characteristics of the West Central, Southwest, and Prairie Agricultural Regions of Alberta

Agricultural region	Regional characteristics: Soil	Annual rainfall	Type of farming
		- inches -	
West Central	deep, black loam	17 to 19	mixed
Southwest	shallow black	15 to 17	grain and grain livestock
Prairie	dark brown and brown	13 to 15	Dryland: grain and grain-livestock Irrigated: sugar beets, canning vegetables, forage and cereal crops

The majority of farms in the southwest and in the prairie regions have a main wheat enterprise combined with some minor enterprises. The distinction between the two regions arises principally from the greater amount and more effective use of moisture in the southwest. In some cases limited acreages of cereal crops, other than wheat, and livestock have a varying adaption to individual farms. On many farms in both regions there is hilly, marshy or stony land unfit for cropping but useful for grazing cattle. The addition of a cattle enterprise under such conditions offers opportunities to use otherwise waste land. Where the soil and climate are not favorable for grain production, and the topography is unsuited to irrigation, cattle and sheep ranching are the major enterprises.

In the sub-humid areas, collectively designated in this report as the west central region, no one crop or livestock enterprise has a predominant advantage. The growing season, although shorter than in the southwest and prairie regions, is long enough to grow adapted varieties of the common cereal grains. However, wheat requires a long growing season and the time required for the effective control of weeds before planting a crop shortens the frost-free period remaining for wheat growth. This tends to limit wheat production to newly broken land, which is comparatively free of weeds, or to rotations with coarse grains and forage crops. As a result, livestock enterprises are highly complementary to crop production in the west central region, since they help to utilize large amounts of coarse grains and forage.

Cropland

The proportion of the total farm area suitable for cropping has an important bearing on its value. The amount of cropland is limited by the quality of the soil, topography, stoniness, cost of clearing wooded areas and miscellaneous factors. The proportion improved of the total farm area in Alberta in 1946 is shown in Table 3.

Table 3.- Proportion Improved of Total Farm Area in Alberta, by Regions, 1946 a/

Region	Improved land
	- per cent -
West Central	49.7
Southwest	57.5
Prairie	35.0
All	48.3

a/ Census of the Prairie Provinces, 1946.

Since the unimproved portion of most farms is relatively unproductive, or is waste land, the value of the cropland alone, under both dryland and irrigation conditions, provides a significant measure for comparisons of sale prices. This comparison for 1948-1950 is shown in Table 4.

Table 4.- Farm Selling Price per Acre and Value of Cropland per Acre, Alberta, 1948-50

Year	Farm selling price	Value of cropland
	- dollars per acre -	
1948	29	42
1949	31	49
1950	33	49

Irrigated Land

Under conditions of level topography the uncertainties of moisture supplies are overcome in some areas by irrigation. There are 14 important irrigation districts, all in the southern part of Alberta, with a total area of 735,448 acres. 1/ New dams, reservoirs and canals which are now being considered, or under construction, will extend the irrigated area.

Table 5.- Per Acre Value of Total Real Estate, and of Irrigable Land and Improvements, Five Irrigation Districts of Alberta, 1949

District	Per acre value of farm based on total acreage	Per acre value of farm based on irrigated acreage
	- dollars per acre -	
Eastern	29	64
Lethbridge northern	54	103
Canada land	32	46
Taber	91	218
St. Mary's River development	80	136
All five districts	43	86

1/ Census of Prairie Provinces, 1946.

Information is not available from which to estimate the average market price of irrigated land. However, the estimated value to the owner of irrigated land and improvements was found in a farm survey made in 1949. 1/ The average valuations which farmers placed on their own land for five organized irrigation districts are presented in Table 5.

Selling Price and Assessed Value

The variations in the movement of the selling price of land become more significant when compared with a normal or base value. The most useful and broad base available for comparison in Alberta is the assessed value. It is an adaptation of selling price selected for a certain period of time and calculated in a specific manner. Assessed value is the summation of all factors affecting the intrinsic worth of the property over a long period of time and under the most probable ownership and use. The procedure followed in the assessment of Alberta farm land starts with the earning capacity. Past yields and prices are considered and adjusted to reasonable future expectations. No value is given to waste land. Buildings are excluded, and the advantages of a favorable location to a shipping point, school, or van route and highway are added to the assessed value. The value ultimately determined for each parcel is related to adjacent parcels, and a uniform base is obtained. 2/

For the purpose of making a comparison between the assessed value and the selling price, the value of buildings was removed to obtain the estimated price of land alone or a bare land price. The excess of the sale price over the assessed value for the years 1946-1950 may be compared with similar information for a more stable period. The average assessed value of the land reported sold during the years 1936-1940 was $10 per acre, whereas the average sale price, including buildings, for the same land was $15 per acre. 3/ The average building investment of $5 per acre for the land reported sold during that period, when deducted from the average selling price, indicates that the bare land and assessed values were about equal during the period 1936-1940. In contrast, the value of all bare land sold throughout Alberta in recent years

1/ A survey of 340 irrigated farms made in 1949 by the Economics Division, Department of Agriculture, in co-operation with the Prairie Farm Rehabilitation Administration.

2/ A detailed procedure is contained in a manual of instruction to land assessors, Department of Municipal Affairs, Alberta.

3/ The average assessed value for the lands reported sold during the 1936-1940 period is based on the assessment values established in 1947.

increased substantially, and in 1950 it was 115 per cent in excess of the assessed value. The increase throughout the province for the five years 1946-1950 is shown in Table 6.

Table 6.- Assessed Value of Land, Estimated Bare Land Sale Price, and Ratio of Sale Price to Assessment, Alberta, 1946-1950

Year	Value of land, 1947 assessment	Estimated bare land sale price	Ratio of sale price to assessment
	- dollars per acre -		- per cent -
1946	12	18	150
1947	13	22	169
1948	11	20	182
1949	12	24	200
1950	13	28	215

The rate of increase varied widely between regions. As there were comparatively few sales reported from the southwest and prairie regions, the divergence of sale prices there during the five-year period is probably overemphasized. But it would appear that the rate of increase of the price above the assessed value was greatest in the southwest, next in the prairie, and least in west central regions.

Volume of Sales

The number of title transfers gives some indication of the annual turnover of land. Land transfers may be classified by the type of ownership or trusteeship. The four main groups are: (1) executors, (2) the crown, (3) mortgage and settlement companies and (4) private owners. Trust companies administering estates take title to land until a new owner is named; land title reverts to the crown through tax default; mortgages and farm settlement companies retain title until the terms of contract are fulfilled. But the number of transfers made to private owners predominates and has significant bearing on the price of land.

An important difficulty in estimating the volume of land sold, from the transfer of titles, is that the sale (or any change of ownership) and transfer may have been made at widely separated times. It is impossible to distinguish from available records the transfers resulting from recent sales and those of transactions made in a previous period. But, if it

is assumed that the proportion of transfers from old and new sales remains the same, the number of transfers will give a good indication of the annual turnover of land ownership. The percentage of Alberta farm land transferred of the total assessed farming area by years is shown in Table 7.

Table 7.- Percentage of the Total Assessed Farming Area of Alberta Transferred Annually, 1940-1950

Year	Turnover of Alberta farm land
	- per cent -
1940	5
1941	5
1942	6
1943	5
1944	11
1945	13
1946	8
1947	9
1948	7
1949	4
1950	6
Average	7.2

The margin of profit above the cost of the investment which imputes value to land has varied widely in the past. 1/ The up and down swings have been great and in some periods prolonged. The possession of land is more prized by willing owners on the up-swing and the demand is greater. Unwilling owners take advantage of the increased demand to liquidate their investment. To a large extent the high rate of turnover in 1944 and 1945 can be accounted for by the disposal of large holdings of land accumulated by creditors, farmers and other investors during the period of low land values.

Supply and Demand for Land

The immediate supply of suitable farm land is limited to existing farm units and readily improved raw and abandoned land. At any point of time in the land market, the supply of land consists of the amount which, for any reason, owners have decided

1/ Net Farm Income Series, Dominion Bureau of Statistics, Ottawa.

to make available for sale. Farms are sold for five main reasons. The distribution of sales according to reason, for the years 1947-1950, is given in Table 8.

Table 8.- Distribution of Land Sales According to Reasons for Sale, Alberta, 1947-1950

Reasons for selling	1947	1948	1949	1950
		- per cent -		
Retirement	29	37	43	29
Changing location	10	8	13	16
Settling an estate	8	10	11	9
Poor health	6	8	3	10
Liquidating an investment, including change of occupation	47	37	30	36
Total	100	100	100	100

The proportion of farmers changing their location or retiring for reasons of health probably remains fairly constant as does the amount of land involved in the settling of estates. But, the volume of land offered for sale varies when dependent upon the retirement of farmers and the liquidation of investments. The net effect on the supply resulting from more land being sold for one reason and less for another is not readily determinable. There has been some increase in the supply in recent years. The improved land in Alberta was 45 per cent of the total occupied in 1936, 46 per cent in 1941 and 48 per cent in 1946. 1/ The increase was accounted for, in part, by wooded land being cleared and broken principally on existing farm units. The main public or corporate clearing plans are those undertaken by the Government of Alberta and the Veterans' Land Act Administration. To the end of 1950 approximately 45,000 acres have been cleared and broken by the province at Wanham; 2/ 120,181 acres cleared and 117,341 acres broken with financial assistance under the Veterans' Land Act. 3/

The demand for land in recent years has been greatly stimulated by both farmers and non-farmers having cash available for investment. To young men, renters, established farmers

1/ Dominion Census.
2/ Department of Lands and Mines, Government of Alberta.
3/ District Superintendent, Veterans' Land Act, Edmonton.

and speculators, the investment in farm land appeared attractive in comparison with other investment opportunities. Excluding purchases for the development of small holdings and government settlement schemes, the percentage distribution of purchases by reasons, for the years 1946-1950, is shown in Table 9.

Table 9.- Distribution of Land Purchases According to Reasons for Purchase, Alberta, 1946-1950

Reasons for buying	1946	1947	1948	1949	1950
			- per cent -		
To start farming and change location	51	58	54	57	37
To enlarge present holdings	44	35	46	32	48
To re-sell	5	7	-	11	15
Totals	100	100	100	100	100

LAND FINANCE

A farm represents both an investment and a place to work. Over a period of years the farm income is expected to exceed all costs including some return on investment and a minimum standard of living. The price level of all farm land is affected by prevailing economic forces, and the relative price of land is based primarily on its earning capacity. However, the relationship of the amount of the original investment to the flow and value of agricultural products may vary through time. The price of land could be a true reflection of its intrinsic worth at the time of purchase, but too high or too low in relation to farm income when judged at another point of time. For this reason the terms of sale creating land indebtedness at high prices takes on a serious aspect. The contract terms of sale fixing future payments may become intolerable during periods of unfavorable production, low prices or both.

Terms of Sale

The terms of sale relate to the proportion of the total sale price paid in cash, the size of the annual cash or crop instalments and the interest rate on the unpaid balance. It is possible that some of the sales reported as having been made for cash, were cash to the seller, but were financed by

the purchaser, at least in part through a loan.

Credit facilities are important to the smooth operation of the land market. But the amount of credit made available to the individual farmers must be based mainly on the debt carrying capacity of the farm. This relates to the amount and rate of retirement of debt and the capacity of the farm to meet the required payments. Most lenders require a substantial down payment since the size of the down payment and the risk of the loss of ownership vary immensely. Usually they will not lend over 50 per cent of the appraised value, or a maximum amount, whichever is the smaller. There are three important reasons

Table 10.- Proportion of Total Sales Made for Cash and Usual Terms of Sales on Extended Payments, Alberta, 1946-1950 a/

Year	All cash sales as a percentage of total sales reported	Sales: Percentage of sale price paid in cash	Sales: Annual payment of unpaid balance: Number	Sales: Annual payment of unpaid balance: Amount	Sales: Most frequent interest rate b/
	- per cent -	- per cent -		-dollars-	- per cent -
1946	64	50	5	850	5
1947	57	42	6	1,004	5
1948	71	57	6	522	5
1949	57	55	6	959	5
1950	53	58	7	622	5

a/ Information from Real Estate Dealers throughout the province.
b/ The average interest rate for this period was 5.04 per cent.

advanced for these limits; (1) if the loan should be foreclosed, the lender would be able to recover more readily the amount of his original investment, plus accrued interest, and the costs of the foreclosure; (2) it is difficult for farmers to repay the full value of the farm and maintain a family; and (3) a borrower's efforts to repay a loan are believed to be in direct proportion to the amount of his equity.

Debt Carrying Capacity

The manageability of contracted long-term debt will bear close scrutiny in the light of production and price conditions that may occur during the period of debt. Flood, drought, early frost, wind, hail, grasshoppers and rust may affect the crop yield. Accidents or disease may strike the livestock.

Prices of farm products may decline. The effects of the extreme vulnerability of farm income to natural and market hazards are emphasized by the Saskatchewan Farm Loan Board experience of basing the appraised value for lending purposes on the market (short-run) price of land. 1/ To overcome the risks associated with income fluctuations occurring in a relatively short period of time the value of the collateral must be appraised in terms of an average or normal value. It appears reasonable that if the current market price were above an estimated average long-range value, a larger down payment would be required to give security of ownership than if the price were lower. With the rate of liquidation of the unpaid balance and interest based on the rate of production, both farm ownership and security of the loan would be stabilized. This arrangement implies that large annual payments would be made when yields were above average and smaller payments when yields were below average. But it would involve a close supervision of the farm business by the lender, thereby increasing the cost of the loan.

Of all the time-sales reported in Alberta for the five years 1946-1950, 52 per cent of the total price was to be financed from subsequent earnings of the farm. 2/ For the year 1949 the average unpaid portion amounted to $5,754 principal and $1,000 interest, payable over a six-year period. The new owner would be required to have an average annual surplus of $1,126 above operating costs, living expenses and interest on his investment for six years to meet the land payment as it became due. The ease with which the yield and price of farm products can change in contrast with more rigid production and living costs suggests the difficulties that may occur when a contract involving future farm income is undertaken.

The portion of farm income that is available for the repayment of land debt is in the nature of a residual amount. The living expenses of the farm family ordinarily represent a first claim on the receipts of the farm business. These are followed by the cash operating costs which have to be met on a current basis. In the short-run, the non-cash allowances for depreciation on machinery, as well as some capital expenditures for these items, may be deferred in favor of payments on land. This deferment can only be continued until the machine has to be replaced. It is only the surplus above all these ordinary costs of operation that can be committed

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1/ Hudson, S.C., "Factors Affecting the Success of Farm Mortgage Loans in Western Canada." Canada Department of Agriculture, Pub. 733, 1942.

2/ Information from Real Estate Dealers throughout the province.

in the long run to retire land debt. The variability of this surplus is a main difficulty in the undertaking of long-term fixed payments for land. There is the additional difficulty imposed upon debtors who discharge their payments over a period of falling prices, since these individuals have, in effect, borrowed a fixed amount of relatively cheap dollars and are making their repayments of this amount in dollars that are increasing in purchasing power.

Crop-Share Payment of Debt

The usefulness of the crop-share device for the payment of debt is receiving recognition. In 1947 the Director of the Veterans' Land Act was authorized to enter into crop-share agreements. The reasons for this type of payment are clearly stated in the covering Order in Council 1/ which recognizes that agreements calling for fixed annual payments sometimes result in extreme difficulty to pay in periods of low crop yields.

These provisions apply only to farmers in an area where wheat is the predominant crop, and does not extend the life of the agreement which usually is 25 years. The veteran under this device is not required to pay on his indebtedness if his wheat yield is six bushels per seeded acre or less. In any year in which the yield is more than six bushels to the acre the farmer pays one-half the excess up to 18 bushels per seeded acre. Delivery of wheat to the Director in excess of 18 bushels is optional although it is to the farmer's advantage to pay off his debt as soon as possible. The farmer contracts to seed at least one-half his acreage to wheat each year depending on the normal operating practice in the area.

The Veterans' Land Act provides an important source of long-term land credit, and the experience gained with a crop-share agreement for the payment of debt will provide some basis for judging the usefulness of the device.

Sources of Credit

The high price of farm real estate is a serious handicap to a widespread distribution of ownership. Without credit facilities sales would be limited to buyers with larger accumulations of cash. Young men could start farming only with great difficulty. Thus in its role of overcoming capital limitation, credit assumes great importance both to the industry as a whole and to the individual farmer.

In addition to the price which is paid for a farm, the proportion of the investor's total savings that is used as a downpayment on the farm and the money available for working

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1/ P.C. 4559, November 7, 1947.

capital are important to the farmer's eventual chances for success. If properly applied, credit is one instrument that can be used to overcome the handicap of poor farm practices where these are caused by lack of working capital. Credit may make the difference between paying for a farm or losing the buyer's equity.

The land market operates principally on private savings, government or commercial loans. Of these, private savings and private loans together probably form the main source of funds. 1/ However, lending agencies, particularly the Veterans' Land Act, the Canadian Farm Loan Board, and investment companies, are important sources of long-term credit. These greatly influence the stability of the land market in Alberta.

Veterans' Land Act.- Under the terms of the Act eligible veterans may borrow a maximum of $4,800 for land, buildings and permanent improvements. A down payment of ten per cent of the purchase price is required, with the unpaid balance amortized for a period of ten to 25 years at an interest charge of 3½ per cent. Provision is made whereby approximately 24 per cent of the debt is absorbed by the Government if the veteran complies with the terms of settlement for the first ten years of the contract. The number of veterans settled in Alberta on "full-time" farms during the period 1945-1950 and the average size of farm are shown in Table 11. 2/

Table 11.- Number of Veterans Settled, Average Size of Farms, Alberta, 1945-1950

	1945	1946	1947	1948	1949	1950
Number of veterans newly settled on "full-time" farms	313	2,235	1,047	494	374	220
Average size of farm settled (acres)	233	241	251	249	262	253

1/ Mortgages held by private lenders on farm real estate in Alberta amounted to at least 29 per cent of all farm mortgages in 1941. Eighth Census of Canada, Alberta, 1941, p. 133, Table 86.

2/ These are the usual type of Veterans' Land Act establishments where the veterans have a conditional land agreement involving a repayable debt. In addition outright grants of $2,320 (no repayable contract) are made to veterans settling on Provincial lands. Advances are also made for the purchase of stock and equipment only (repayable on a conditional contract) when veterans are established on leased land. There were 188 veterans established in 1950 under these two arrangements.

Canadian Farm Loan Board.- The Board is an agency established in 1929 by the Dominion Government. It administers a system of long-term farm mortgage credit. In 1934 the original Act was amended to permit the Board to extend intermediate and short-term credit to its long-term borrowers by the way of supplementary advances secured by second and chattel mortgages. First mortgages may be obtained up to 25 years on no more than 50 per cent of the appraised value of the land. The maximum loan to any one borrower is $5,000 on first mortgages at an interest rate of 4½ per cent. Loans for terms of more than five years are payable in equal annual or semi-annual instalments of combined principal and interest on an amortized plan of repayment. Loans for five years or less are payable on terms fixed by the board.

During the 20 year period 1929-1948 an average of 1,598 first mortgage loans were made annually with an average value of $1,920. In the year ending March 31, 1950, there were 263 first mortgages made with an average value of $2,107.

Mortgage and Investment Companies.- Farm loan companies have long been active in the Alberta land market. About 35 insurance, trust, and loan companies have investments in Alberta. 1/ In 1937 their investments amounted to $39,734,000. The investment in 1949 had decreased to $8,492,000 reflecting the more favorable financial position of Alberta farmers. However, new loans are being made. In 1949 there were 329 new loans with an average value of $4,278.

1/ The companies are members of the Dominion Mortgage and Investment Association, Toronto.